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EXAMINER

GRAY, D

ART UNIT

PAPER NUMBER

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Paper No. 15

Application Number: 09/218,763
Filing Date: December 22, 1998
Appellant(s): ALEXEFF, IGOR

Preston H. Smirman
For Appellant

MAILED

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GROUP 2500

EXAMINER'S ANSWER

This is in response to appellant's brief on appeal filed October 23, 2000.

(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) *Summary of Invention*

The summary of invention contained in the brief is deficient because the summary of the invention is merely a copy of claim 1 with plural references to the specification and drawing figures. The summary provided by appellant does not serve to explain the invention.

(6) *Issues*

The appellant's statement of the issues in the brief is correct.

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(7) *Grouping of Claims*

The rejection of claims 1, 2, 4-9, 11, 13-19 and 21-24 stand or fall together as set forth by appellant. Therefor the limitations of claim 1 shall be addressed in the Examiner's Answer.

Appellant provides separate arguments for the 35 U.S.C. 112, second paragraph rejection of claim 11. The examiner has addressed these arguments in order to expedite prosecution.

(8) *Claims Appealed*

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) *Prior Art of Record*

No prior art is relied upon by the examiner in the rejection of the claims under appeal.

(10) *Grounds of Rejection*

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 2, 4-9, 11, 13-19 and 21-24 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

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The limitations of claim 1 shall be addressed with respect to the embodiment of figure 3 set forth on page 7, line 10 to page 8, line 4.

Claim language	Specification
An <u>image viewing device</u> , comprising:	image viewing device 30 is comprised primarily of two major components, page 7, lines 10-11
a <u>member</u> having an area defining	member 32 is a round or oval cup-shaped device, page 7, lines 17-18
an <u>aperture</u> , the light rays from the image entering through the aperture; and	aperture 34 extends completely through the member 32, page 7, lines 12-13; and the aperture is defined as a pinhole aperture, page 9, lines 4-24
an <u>optical block</u> comprised of a refractive material, the optical block being located adjacent to the aperture, <i>the optical block being capable of compressing the light rays from the image that pass through the aperture so as to produce an image comprising at least a 180⁰ field of view.</i>	optical block 36 is defined as a material of high index of refraction, page 13, line 21 to page 14, lines 12 the italicized text is unsupported by the specification

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The function of the pinhole aperture 34 is well known in the art. A pinhole camera provides a depth of field which extends from the front of the camera to the horizon. And a pinhole camera provides a wide angle of view. The field of view of a pinhole camera is substantially less than 180 degrees as it is limited by several factors including the thickness of the aperture member and the distance to the film.

The function of an optical block 36 made of a material which has a high index of refraction is well known in the art. Light from a first medium entering a second medium having a higher index of refraction is bent towards perpendicular proportional to the index of refraction.

Thus light entering the pinhole aperture 34 striking the surface of the optical block 36 will be bent toward the optical axis of aperture 34. That is the area of the image projected by the pinhole aperture 34 will cover a smaller area when the optical block 36 is present as opposed to when there is just air.

However it is clear that the light rays from objects at 180 degrees cannot even pass through pinhole aperture 34. And it is clear that placing the optical block 36 behind the pinhole aperture 34 will not impact the light rays on the front side of the pinhole aperture 34. Therefore the disclosed invention is incapable of producing "an image comprising at least a 180⁰ field of view" as claimed.

Appellant states that "[b]ecause the Examiner stated that the embodiment of Fig. 10 arguably supports the claimed subject matter, the Applicant will focus on this particular embodiment for the sake of brevity" (Brief page 4, lines 17-19). As appellant has chosen to have the claims stand or fall together, the embodiment of figure 10 is not at issue as only claim 24 is directed to this embodiment.

However, as appellant has not provided arguments for patentability with respect to claim 1 and in order to expedite prosecution the examiner will discuss the embodiment of figure 10 below and address appellant's arguments.

The embodiment of figure 10 includes an additional "optional lens 60." Lens 60 is defined as "[t]he composition of lens 60 (actually a flat plate of about 10 times the aperture 44 diameter and a thickness about equal to the aperture 44 diameter) is of the same optical properties and material as the optical block 46. Alternatively, lens 60 could be harder than the material of the optical block 46 to resist wear and abrasion" (specification page 14, line 15-19). The specification further states "lens 60 must be in physical contact with the optical block 46 to get the desired improvement" (specification page 14, lines 22-23). The specification purports that "lens 60 allows for better viewing of the image to be produced by slightly improving the image at the edges. Additionally, this lens design is capable of producing field of view images greater than 180° and up to about 220° " (specification page 15, lines 1-4).

It is clear that light striking the front surface of lens 60 will be bent by refraction. Note that light striking the optical block 46 will not be bent as lens 60 and optical block 46 have the same index of refraction. Thus the field of view of pinhole aperture 44 will be increased.

The specification fails to disclose how the flat plate of lens 60 is capable of directing light to the aperture 44 from objects beyond 180 degrees. Light from objects at 180 degrees or more will not strike the front surface of lens 60. As lens 60 is a flat plate with an optimal thickness of 100 microns, light can strike the edge thereof. Light striking the edge of the flat plate at exactly 180 degrees will not be bent toward aperture 44, as there is no angular component in the optical axis direction. Light striking the edge of lens 60 at an angle greater than 180 degrees will at

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most be bent into the plane parallel to the surface of member 42. Refraction does not provide a reflected component and thus light coming from behind aperture 44 cannot be refracted back towards aperture 44. Therefor even in the embodiment having lens 60 the viewing device is incapable of producing “an image comprising at least a 180⁰ field of view” as claimed.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 11 is rendered indefinite by the claimed “device selected from the group consisting of the optical block, the image intensifying means, and combinations thereof.” The “optical block” is required by base claim 1 and the “image intensifying means” is required by base claim 9. These elements may not be optionally included or eliminated from dependent claim 11.

Claims 19 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Appellant concedes the correctness of the 35 U.S.C. 112, second paragraph, rejection of claim 19.

(11) Response to Argument

Arguments regarding the 35 U.S.C. 112, first paragraph rejection

Appellant's statement that "[o]nly one embodiment of the present invention needs to disclose an apparatus for capturing an image field of at least 180 degrees to satisfy the requirements of 35 U.S.C. 112, first paragraph" (Brief page 4, lines 15-17) is not correct. Every claim limitation must be supported by an enabling disclosure.

Appellant's conclusion "[t]hus, the image produced has to be comprised of at least a 180 degree field of view" (Brief page 5, lines 4-5, emphasis provided) is not support by any evidence or showing of fact. Nor has Appellant shown any evidence to support appellant's contention that it is "a simple optical principle, known to one of ordinary skill in the art" (Brief page 5, lines 5-6).

Appellant's statement "[t]his is a misinterpretation of the description found in the specification" (Brief page 5, lines 9-10) is not well taken. It is patently clear that the examiner is quoting directly from appellant's specification and has not misinterpreted applicant's description.

Appellant provides no evidence to support the contention that the edges of the "lens 60 could be slightly rounded at the edges of the plate while still be [sic] considered 'flat' as that term is commonly understood in the art" (Brief page 5, lines 13-14). And appellant provides no support for the mere conclusion that as a result of such rounding "light rays, even from an angle greater than 180 degrees, would be bent by the lens 60 towards the aperture 44" (Brief page 5, lines 15-16).

Appellant fails to argue the patentability of claim 1 with respect to 35 U.S.C. 112, first paragraph. And appellant's arguments for the embodiment of figure 10, claim 24, are mere

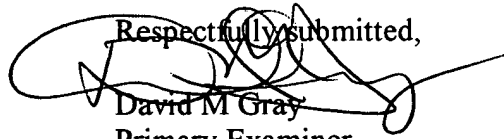
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conclusions and speculations. Appellant fails to point out where the outstanding specification provides any support for these conclusions and speculations. And appellant fails to provide any other evidence or showing of fact to support these conclusions and speculations.

Arguments regarding the 35 U.S.C. 112, first paragraph rejection


Appellant appears to argue that because the "focus of the claim [11] is on the recording means and the image produced, not the optical block itself" the claimed "device selected from the group consisting of the optical block, the image intensifying means, and combinations thereof" is irrelevant. The image intensifying means and optical block are required by base claim 9. Therefor these elements may not be optionally excluded from a dependent claim.

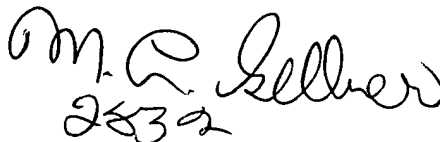
For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

David M Gray
Primary Examiner
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dmg
November 3, 2000

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